

IN THE CLAIMS:

Please cancel Claims 1 to 7, 12, 13, 16 to 20, 24, 28 and 32 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 8 to 11, 14, 15, 21 to 23, 25 to 27 and 29 to 31, and add new Claims 33 to 40, as follows.

Claims 1 to 7 (Cancelled).

8. (Currently Amended) A vibration wave driving apparatus, comprising:

a vibration element including a first elastic member, a second elastic member, a third elastic member and an electro-mechanical energy conversion element, said third elastic member and said electro-mechanical energy conversion element being that are disposed between said first a first elastic member and said second a second elastic member; and

a rotor that is brought into contact with a frictional surface of said the third elastic member,

wherein when a driving signal is applied to said the electro-mechanical energy conversion element, said the vibration element excites a first traveling wave at the frictional surface by generating by a bending vibrations which are displaced in a direction orthogonal to an axial direction of said the vibration element and a second traveling wave at the frictional surface by generating an out-of-plane bending vibrations of said the third elastic member, and a circular or an elliptical movement movements is produced at the frictional surface by a vibration wave as a composite of the first traveling wave and the second traveling wave.

9. (Currently Amended) A vibration element according to claim 8, wherein the driving signal applied to said the electro-mechanical energy conversion element is used for exciting the bending vibrations which are displaced in a direction orthogonal to the axial direction of said the vibration element.

10. (Currently Amended) A vibration wave driving apparatus, comprising:

a vibration element including a first elastic member, a second elastic member, a third elastic member and an electro-mechanical energy conversion element, said and a third elastic member and said electro-mechanical energy conversion element being that are disposed between a first said first elastic member and a second said second elastic member, and said the third elastic member having a frictional surface and an a larger outer diameter larger than that of said the electro-mechanical energy conversion element; and
a rotor that is brought into contact with the frictional surface of said the vibration element,

wherein said the vibration element excites bending a bending vibrations which are displaced in a direction orthogonal to an axial direction of said the first elastic member and said the second elastic member through application of a driving signal to said the electro-mechanical energy conversion element, and

a center of an anti-node of the bending vibration does not coincide with a center portion of said the third elastic member in an axial direction of said the vibration element.

11. (Currently Amended) A vibration wave driving apparatus, comprising:

a vibration element including a first elastic member, a second elastic member, a third elastic member and an electro-mechanical energy conversion element, said and a third elastic member that are and said electro-mechanical energy conversion element being disposed between a first said first elastic member and a second said second elastic member; and

a rotor that is brought into contact with a frictional surface of said third elastic member the vibration element,

wherein said the vibration element excites a an out-of-plane bending vibration in a plane orthogonal to an axial direction of said the vibration element in said the third elastic member by generating by a bending vibrations which are displaced in a direction orthogonal to the axial direction.

Claims 12 and 13 (Cancelled).

14. (Currently Amended) A vibration wave driving apparatus according to claim 8, wherein a center portion in the axial direction of said the third elastic member does not coincide with a center of an anti-node of the bending vibrations which are displaced in a direction orthogonal to the axial direction of said the vibration element.

15. (Currently Amended) A vibration wave driving apparatus according to claim 11, wherein a center portion in the axial direction of said the third elastic member does not coincide with a center of an anti-node of the bending vibrations which are displaced in a direction orthogonal to the axial direction of said the vibration element.

Claims 16 to 20 (Cancelled).

21. (Currently Amended) A vibration wave driving apparatus according to claim 8, wherein at least one of end portion portions of said the vibration element has an increased diameter.

22. (Currently Amended) A vibration wave driving apparatus according to claim 10, wherein at least one of end portion portions of said the vibration element has an increased diameter.

23. (Currently Amended) A vibration wave driving apparatus according to claim 11, wherein at least one of end portion portions of said the vibration element has an increased diameter.

Claim 24 (Cancelled).

25. (Currently Amended) A vibration wave driving apparatus according to claim 8, wherein said the third elastic member includes a thinner portion than a portion at which the frictional surface is located, on an inner peripheral side with respect to the frictional surface.

26. (Currently Amended) A vibration wave driving apparatus according to claim 10, wherein said the third elastic member includes a thinner portion than a portion at which the frictional surface is located, on an inner peripheral side with respect to the frictional surface.

27. (Currently Amended) A vibration wave driving apparatus according to claim 11, wherein said the third elastic member includes a thinner portion than a portion at which the frictional surface is located, on an inner peripheral side with respect to the frictional surface.

Claim 28 (Cancelled).

29. (Currently Amended) A vibration wave driving apparatus according to claim 8, wherein said the vibration element further includes another electro-mechanical energy conversion element that is fixed to said the third elastic member.

30. (Currently Amended) A vibration wave driving apparatus according to claim 10, wherein said the vibration element further includes another electro-mechanical energy conversion element that is fixed to said the third elastic member.

31. (Currently Amended) A vibration wave driving apparatus according to claim 11, wherein said the vibration element further includes another electro-mechanical energy conversion element that is fixed to said the third elastic member.

Claim 32 (Cancelled).

33. (New) A vibration wave driving apparatus, comprising:
a vibration element including a first elastic member, a second elastic member and an electro-mechanical energy conversion element which is disposed between said first elastic member and said second elastic member; and

a rotor that is brought into contact with a frictional surface of said first elastic member,

wherein said first elastic member has a first portion provided with said frictional surface, and a second portion having a diameter which is smaller than that of the first portion and which is located within said rotor, and

when a driving signal is applied to the electro-mechanical energy conversion element, said vibration element excites a first traveling wave at the frictional surface by generating bending vibrations which are displaced in a direction orthogonal to an axial direction of said vibration element and a second traveling wave at the frictional surface by generating bending vibrations in said third elastic member, and a circular or an elliptical movement is produced at the frictional surface by a vibration wave as a composite of the first traveling wave and the second traveling wave.

34. (New) A vibration wave driving apparatus according to Claim 33, wherein a center portion in the axial direction of said first portion does not coincide with a center of an anti-node of the bending vibrations which are displaced in a direction orthogonal to the axial direction of said vibration element.

35. (New) A vibration wave driving apparatus according to Claim 33, wherein said first portion of said first elastic member includes a thinner portion than a portion at which the frictional surface is located, on an inner peripheral side with respect to the frictional surface.

36. (New) A vibration wave driving apparatus, comprising:
a vibration element including a first elastic member, a second elastic member and an electro-mechanical energy conversion element which is disposed between said first elastic member and said second elastic member; and

a rotor that is brought into contact with the frictional surface of said first elastic member,

wherein said first elastic member has a first portion provided with said frictional surface, and a second portion having a diameter which is smaller than that of said first portion and which is located within said rotor,

the vibration element excites bending vibrations which are displaced in a direction orthogonal to an axial direction of said vibration element through application of a driving signal to said electro-mechanical energy conversion element, and

a center of an anti-node of the bending vibration does not coincide with a center portion of said first portion in an axial direction of said vibration element.

37. (New) A vibration wave driving apparatus according to Claim 36, wherein said first portion of said first elastic member includes a thinner portion than a portion at which the frictional surface is located, on an inner peripheral side with respect to the frictional surface.

38. (New) A vibration wave driving apparatus, comprising:
a vibration element including a first elastic member, a second elastic member and an electro-mechanical energy conversion element which is disposed between said first elastic member and said second elastic member; and
a rotor that is brought into contact with a frictional surface of said first elastic member;

wherein said first elastic member has a first portion provided with said frictional surface, and a second portion having a diameter which is smaller than that of the first portion and which is located within said rotor, and

the vibration element excites a bending vibration in a plane orthogonal to an axial direction of said vibration element in said third elastic member by generating bending vibrations which are displaced in a direction orthogonal to the axial direction.

39. (New) A vibration wave driving apparatus according to Claim 38, wherein a center portion in the axial direction of said first portion does not coincide with a center of an anti-node of the bending vibrations which are displaced in a direction orthogonal to the axial direction of said vibration element.

40. (New) A vibration wave driving apparatus according to Claim 38, wherein said first portion of said first elastic member includes a thinner portion than a portion at which the frictional surface is located, on an inner peripheral side with respect to the frictional surface.